

In the Specification

Amend the paragraph at Page 9, lines 1 -12, as follows:

In a dual frequency metal detector, it will often not be known in advance which of two frequencies, e.g., "A" or "C" will provide optimum resolution for discriminating between the metal objects that happen to be in a given target volume of ground. Thence, ~~the use of~~ multiple frequencies can be used to ~~test~~ interrogate the target and the optimum frequency identified and selected either by the user or by the detector. It can be readily appreciated that a ~~A~~ number of different algorithms can be used for this purpose ~~suggest themselves from~~ in consideration of Figure 2. For example, frequency "C" can be identified as preferable to frequencies "A" and "B" for discriminating between the metal objects "a," "b," and "c," by noting the frequency for which the frequency component portion  $12_{\text{resistive}}$  is the largest, e.g., by noting that  $Y_{ac}$  is greater than either  $Y_{ab}$  or  $Y_{aA}$ , or by noting that  $Y_{ac}$  is greater than any of the other frequency component portions  $12_{\text{resistive}}$ . Alternative algorithms or selection criteria may be employed consistent with the above without departing from the principles of the invention.

Amend the paragraph at Page 15, lines 5 - 13, as follows:

Where the one or more criteria is met, the detector may take one action (step 32a), such as displaying, on a display device 83 (Figure 5), both identifications or choosing one based on some additional criteria. On the other hand, if the one or more criteria is not met, the detector may take a different step (step 32b), e.g., both responses may be discarded, the user may be shown both

identifications and be left to draw his or her own conclusions, or the detector may be adapted to characterize the amount of disagreement and either annotate one or both identifications with an estimate of confidence or robustness, or propose a compromise identification. In a detector employing more than two frequencies, a multi-voting or tie-breaking scheme may be employed.

Amend the paragraph at Page 15, lines 14 - 17, as follows:

~~Criteria~~ The one or more criteria 30 may also be provided ~~in the correlation method 100 described above, such as~~ in the form of a tolerance on the comparison. For example, where the phase angles at two frequencies are compared by subtracting one from the other, the critiera 30 may be a number of allowable degrees of difference.

Amend the paragraph at Page 15, lines 18 - 21, as follows:

Further, the detector may take one action where the one or more criteria is met and another where the one or more criteria is not met. For example, where the signal is subtracted from the aforescribed audio output, the result may be compared to a threshold below which the audio signal is entirely suppressed.